cofe

03650.002036.



### **PATENT**

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of:	)	
XIAO-CHANG CHARLES LI, et al.	:	Examiner: D. Garrett
AIAO-CHANG CHARLES LI, et al.	) :	Group Art Unit: 1774
Application No.: 10/634,755	)	•
Filed: August 6, 2003	: )	
For: ORGANIC ELECTROLUMINESCENT DEVICE BASED ON PYRENE DERIVATIVES	· ) : )	
U.S. Patent No.: 6,852,429 B1	· )	November 15, 2005
Issued: February 8, 2005	)	11010111001 13, 2003
Commissioner for Patents P.O. Box 1450		

# CERTIFICATE OF CORRECTION \_\_\_\_\_UNDER RULE 322

Sir:

It is respectfully requested that a Certificate of Correction be issued by the Patent and Trademark Office due to errors which appear in the printed patent as a result of Patent and Trademark Office mistakes. A Certificate of Correction form, in duplicate, is enclosed.

Certificate
NOV 1 8 2005
of Correction

Patentees' undersigned attorney may be reached in our California office by telephone at (714) 540-8700. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

Attorney for Patentees Michael K. O'Neill Registration No. 32,622

FITZPATRICK, CELLA, HARPER & SCINTO 30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

CA\_Main 104885v1

# **CERTIFICATE OF CORRECTION**

PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 1 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### ON THE TITLE PAGE [57] ABSTRACT:

Line 21, "
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$Z_2$$
" should read --
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$X_4$$

$$X_6$$

$$X_4$$

### COLUMN 1:

Line 52, "triarylamnine-based" should read --triarylamine-based--.

### COLUMN 3:

Line 60, "through X<sub>5</sub>" should read --through X<sub>6</sub>--.

### COLUMN 4:

Line 15,

### MAILING ADDRESS OF SENDER:

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PATENT NO. <u>US 6,852,429 B1</u>

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# **CERTIFICATE OF CORRECTION**

PATENT NO.

US 6,852,429 B1

DATED

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 2 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 35,

and

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PATENT NO. <u>US 6,852,429 B1</u>

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# **CERTIFICATE OF CORRECTION**

PATENT NO.

US 6,852,429 B1

DATED

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 3 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 60,

### COLUMN 5:

Line 15,

### MAILING ADDRESS OF SENDER:

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PATENT NO. <u>US 6,852,429 B1</u>

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## **CERTIFICATE OF CORRECTION**

PATENT NO.

US 6,852,429 B1

DATED

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 4 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 35,

Line 60,

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PATENT NO. <u>US 6,852,429 B1</u>

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# **CERTIFICATE OF CORRECTION**

PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 5 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### COLUMN 6:

Line 35,

### MAILING ADDRESS OF SENDER:

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## CERTIFICATE OF CORRECTION

PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 6 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 55,

### COLUMN 7:

Line 10,

### MAILING ADDRESS OF SENDER:

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PATENT NO. <u>US 6,852,429 B1</u>

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# **CERTIFICATE OF CORRECTION**

PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 7 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 25,

"should read -- 
$$D - (CH_2)n$$
" should read --  $D - (CH_2)n$ "  $D - (CH_2)n$ "  $D - (CH_2)n$ "  $D - (CH_2)n$ "  $D - (CH_2)n$ 

Line 39, "missive" should read --emissive--.

### COLUMN 9:

Line 15,

### MAILING ADDRESS OF SENDER:

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# **CERTIFICATE OF CORRECTION**

·PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 8 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 60,

### MAILING ADDRESS OF SENDER:

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PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 9 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### COLUMN 10:

### **MAILING ADDRESS OF SENDER:**

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## **CERTIFICATE OF CORRECTION**

PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 10 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 60,

"should read --

### COLUMN 11:

" should read --

#### MAILING ADDRESS OF SENDER:

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PATENT NO.

US 6,852,429 B1

DATED

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 11 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 25,

Line 45,

### **MAILING ADDRESS OF SENDER:**

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PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S)

XIAO-CHANG CHARLES LI, et al.

Page 12 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 60,

### COLUMN 12:

#### MAILING ADDRESS OF SENDER:

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### **CERTIFICATE OF CORRECTION**

PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 13 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### COLUMN 13:

Line 3, "can as" should read --can be used as--; and

Line 30, "
$$X_1 \longrightarrow X_2 \times X_3 \times Z_1 \times Z_1 \times Z_2 \times$$

### COLUMN 14:

Line 5, "
$$X_1$$

$$Z_1$$

$$Z_2$$

$$X_3$$

$$Z_1$$

$$Z_2$$

$$X_4$$

$$X_6$$

$$X_4$$

$$X_5$$

$$X_1$$

$$X_2$$

$$X_3$$

$$Y_1$$

$$Y_2$$

$$Z_2$$

$$X_6$$

$$X_4$$

Line 19, "heteraoryl" should read --heteroaryl--; and

### MAILING ADDRESS OF SENDER:

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# **CERTIFICATE OF CORRECTION**

PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 14 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 50, "
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$X_1$$

$$X_2$$

$$X_3$$

$$Y_1$$

$$Z_2$$

$$X_4$$

$$X_6$$

$$X_4$$

$$X_5$$

### COLUMN 15:

Line 20, "
$$X_1$$
  $X_2$   $X_3$   $X_1$   $X_2$   $X_3$   $X_4$  "should read -- $X_4$   $X_5$   $X_4$   $X_5$   $X_4$   $X_5$ 

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PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 15 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 55,

### COLUMN 16:

Line 5, "
$$X_1 \longrightarrow X_2 \times X_3 \times Z_1 \times Z_2$$

$$X_1 \longrightarrow X_2 \times X_3 \times Z_1 \times Z_2$$

$$X_1 \longrightarrow X_2 \times X_3 \times Z_1 \times Z_2$$

$$X_2 \times X_3 \times Z_1 \times Z_2 \times Z_2$$

$$X_3 \times Z_1 \times Z_2 \times Z_2 \times Z_2$$

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# **CERTIFICATE OF CORRECTION**

PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 16 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 40,

and

Line 60, "
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$Z_2$$
" should read --
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$X_2$$

$$X_4$$

$$X_5$$

### COLUMN 17:

Line 2, "atoms," should read --atoms;--;

Line 4, "deute-" should read --hydrogen--;

Line 5, "rium" should be deleted;

Line 6, " $X_3$ " should read -- $X_3$ ,--;

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PATENT NO. <u>US 6,852,429 B1</u>

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## **CERTIFICATE OF CORRECTION**

PATENT NO.

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DATED

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 17 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 20,

Line 45, "
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$Z_2$$

$$X_3$$

$$Z_1$$

$$Z_2$$

$$X_4$$

$$X_4$$

$$X_5$$

$$X_4$$

$$X_5$$

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PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 18 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### COLUMN 18:

Line 20,

Line 45, "
$$X_1 \longrightarrow X_2 \times X_3 \times Z_1 \times Z_1 \times Z_2 \times$$

Line 60, "atoms" should read --atoms,--.

### MAILING ADDRESS OF SENDER:

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PATENT NO. <u>US 6,852,429 B1</u>

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# **CERTIFICATE OF CORRECTION**

PATENT NO.

US 6,852,429 B1

DATED

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 19 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### COLUMN 19:

Line 30, "
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$Z_2$$
" should read --
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$X_4$$

$$X_6$$

$$X_4$$

#### MAILING ADDRESS OF SENDER:

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US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 20 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### COLUMN 20:

Line 1, "
$$X_1$$
 $X_2$ 
 $X_3$ 
 $X_1$ 
 $X_2$ 
 $X_3$ 
 $X_1$ 
 $X_2$ 
 $X_3$ 
 $X_4$ 
 $X_5$ 

The second read of the second read  $X_1$ 
 $X_2$ 
 $X_3$ 
 $X_4$ 
 $X_5$ 

The second read  $X_1$ 
 $X_2$ 
 $X_3$ 
 $X_4$ 
 $X_5$ 
 $X_4$ 
 $X_5$ 

Line 50, "
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$Z_2$$
"should read --
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$X_4$$

$$X_5$$

### COLUMN 21:

Line 30, "
$$X_1 \longrightarrow X_2 \longrightarrow X_3 \longrightarrow X_1 \longrightarrow X_2 \longrightarrow X_3 \longrightarrow X_1 \longrightarrow X_2 \longrightarrow X_2 \longrightarrow X_3 \longrightarrow X_2 \longrightarrow$$

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PATENT NO. <u>US 6,852,429 B1</u>

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US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 21 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### COLUMN 22:

Line 1, "
$$X_2$$
  $X_3$   $X_1$   $X_2$   $X_3$   $X_4$   $X_5$  Should read -- $X_4$   $X_5$   $X_4$   $X_5$   $X_4$   $X_5$ 

Line 55, "
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$Z_2$$
" should read --
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$Z_2$$

$$X_4$$

$$X_6$$

$$X_4$$

### MAILING ADDRESS OF SENDER:

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New York, New York 10112-3801
(212) 218, 2100. Telephone

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US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 1 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### ON THE TITLE PAGE [57] ABSTRACT:

Line 21, "
$$X_1$$

$$X_2$$

$$X_3$$

$$X_1$$

$$X_1$$

$$X_2$$

$$X_3$$

$$Y_1$$

$$X_2$$

$$X_3$$

$$X_1$$

$$X_2$$

$$X_3$$

$$X_1$$

$$X_2$$

$$X_3$$

$$X_1$$

$$X_2$$

$$X_3$$

$$X_4$$

$$X_5$$

### COLUMN 1:

Line 52, "triarylamnine-based" should read --triarylamine-based--.

### COLUMN 3:

Line 60, "through X<sub>5</sub>" should read --through X<sub>6</sub>--.

### COLUMN 4:

Line 15,

### MAILING ADDRESS OF SENDER:

FITZPATRICK, CELLA, HARPER & SCINTO 30 Rockefeller Plaza New York, New York 10112-3801 (212) 218-2100 - Telephone (212) 218-2200 - Facsimile PATENT NO. <u>US 6,852,429 B1</u>

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INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 2 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 35,

and

### **MAILING ADDRESS OF SENDER:**

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INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 3 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 60,

### COLUMN 5:

Line 15,

#### MAILING ADDRESS OF SENDER:

FITZPATRICK, CELLA, HARPER & SCINTO 30 Rockefeller Plaza New York, New York 10112-3801 (212) 218-2100 - Telephone (212) 218-2200 - Facsimile PATENT NO. <u>US 6,852,429 B1</u>

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Form PTO 1050 (Rev. 3-82) CA Main 104885v1

PATENT NO.

US 6,852,429 B1

DATED

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 4 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 35,

Line 60,

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PATENT NO. <u>US 6,852,429 B1</u>

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PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 5 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### **COLUMN 6:**

### Line 35,

" should read --

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PATENT NO. <u>US 6,852,429 B1</u>

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PATENT NO.

US 6,852,429 B1

DATED

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 6 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### COLUMN 7:

Line 10,

### MAILING ADDRESS OF SENDER:

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# CERTIFICATE OF CORRECTION

PATENT NO.

US 6,852,429 B1

DATED

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 7 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 25,

Line 39, "missive" should read --emissive--.

### COLUMN 9:

Line 15,

### **MAILING ADDRESS OF SENDER:**

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CA\_Main 104885v1

PATENT NO. <u>US 6,852,429 B1</u>

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**CERTIFICATE OF CORRECTION** 

PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 8 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 35,

Line 60,

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PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 9 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### COLUMN 10:

### **MAILING ADDRESS OF SENDER:**

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## CERTIFICATE OF CORRECTION

PATENT NO.

US 6,852,429 B1

DATED

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 10 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 60,

"should read --

### COLUMN 11:

"should read --

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US 6,852,429 B1

DATED

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 11 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 25,

Line 45.

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US 6,852,429 B1

DATED

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 12 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 60,

### COLUMN 12:

Line 10,

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PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 13 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### COLUMN 13:

Line 3, "can as" should read --can be used as--; and

Line 30, "
$$X_1 \longrightarrow X_2 \times X_3 \times Z_1 \times Z_1 \times Z_2 \times$$

### COLUMN 14:

Line 5, "
$$X_1$$

$$X_2$$

$$X_3$$

$$X_1$$

$$X_1$$

$$X_2$$

$$X_3$$

$$X_1$$

$$X_2$$

$$X_3$$

$$X_1$$

$$X_2$$

$$X_3$$

$$X_1$$

$$X_2$$

$$X_3$$

$$X_4$$

$$X_5$$

Line 19, "heteraoryl" should read --heteroaryl--; and

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PATENT NO.

US 6,852,429 B1

DATED

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 14 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 50, "
$$X_1 \longrightarrow X_2 \times X_3 \times Z_1 \times Z_1 \times Z_2 \times$$

### COLUMN 15:

Line 20, "
$$X_1$$
  $X_2$   $X_3$   $X_1$   $X_2$   $X_3$   $X_4$   $X_5$  should read -- $X_4$   $X_5$   $X_4$   $X_5$ 

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## CERTIFICATE OF CORRECTION

PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 15 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 55,

### COLUMN 16:

Line 5, "
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$Z_2$$
"should read --
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$Z_2$$

$$X_6$$

$$X_4$$

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### CERTIFICATE OF CORRECTION

PATENT NO.

US 6,852,429 B1

DATED

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 16 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

and

Line 60, "
$$X_1$$
  $X_2$   $X_3$   $X_1$   $X_2$   $X_3$   $X_4$   $X_5$   $X_4$   $X_5$   $X_4$   $X_5$ 

### COLUMN 17:

Line 2, "atoms," should read --atoms;--;

Line 4, "deute-" should read --hydrogen--;

Line 5, "rium" should be deleted;

Line 6, " $X_3$ " should read -- $X_3$ ,--;

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# **CERTIFICATE OF CORRECTION**

PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 17 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 20,

Line 45, "
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$Z_2$$
"should read --
$$X_1$$

$$X_2$$

$$X_3$$

$$Y_1$$

$$Z_2$$

$$X_6$$

$$X_4$$

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**CERTIFICATE OF CORRECTION** 

PATENT NO.

US 6,852,429 B1

DATED

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 18 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### COLUMN 18:

Line 20,

Line 45, "
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$X_1$$

$$X_2$$

$$X_3$$

$$X_1$$

$$X_2$$

$$X_3$$

$$X_1$$

$$X_2$$

$$X_3$$

$$X_1$$

$$X_2$$

$$X_3$$

$$X_4$$

$$X_5$$

Line 60, "atoms" should read --atoms,--.

### **MAILING ADDRESS OF SENDER:**

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PATENT NO.

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**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 19 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### COLUMN 19:

Line 30, "
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$Z_2$$
"should read --
$$Y_2$$

$$X_4$$

$$X_6$$

$$X_4$$

### **MAILING ADDRESS OF SENDER:**

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## **CERTIFICATE OF CORRECTION**

PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 20 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### COLUMN 20:

Line 1, "
$$X_2$$
  $X_3$   $X_1$   $X_2$   $X_3$   $X_4$  "should read -- $X_1$   $X_2$   $X_3$   $X_4$   $X_5$   $X_4$   $X_5$ 

Line 50, "
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$Z_2$$
" should read --
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$Z_2$$

$$X_4$$

### COLUMN 21:

Line 30, "
$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$X_1$$

$$X_2$$

$$X_3$$

$$Z_1$$

$$X_2$$

$$X_4$$

$$X_4$$

$$X_6$$

$$X_4$$

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## CERTIFICATE OF CORRECTION

PATENT NO.

US 6,852,429 B1

**DATED** 

February 8, 2005

INVENTOR(S) :

XIAO-CHANG CHARLES LI, et al.

Page 21 of 21

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### COLUMN 22:

Line 1, "
$$X_1$$
  $X_2$   $X_3$   $X_1$   $X_2$   $X_3$   $X_4$   $X_5$  should read -- $X_1$   $X_2$   $X_3$   $X_4$   $X_5$   $X_4$   $X_5$ 

Line 55, "
$$X_1 \longrightarrow X_2 \times X_3 \times Z_1 \times Z_1 \times Z_2 \times$$

### **MAILING ADDRESS OF SENDER:**

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